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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,673	08/14/2001	Roger Bradshaw Quincy III	KCC-15,762	9080

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HOFFMAN ESTATES, IL 60195

EXAMINER

SINGH, ARTI R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/929,673

Applicant(s)

QUINCY, ROGER BRADSHAW

Examiner

Ms. Arti Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sun et al. (USPN 5,882,357). Sun et al. disclose durable and regenerable microbiocidal textiles and methods for preparing the same. Such textiles can be readily prepared using a wet finishing process to covalently attach a heterocyclic N-halamine to a cellulose based material or other polymeric material. Once prepared, the textiles of the present invention have a broad spectrum of biocidal activity against pathogenic microorganisms. Moreover, the biocidal activity of such textiles can be regenerated by washing with a halogenated solution (abstract). The present invention provides a process for preparing a microbiocidal cellulosic, cellulosic/polyester or polyester textile precursor, the process comprising: (a) immersing a cellulosic, cellulosic/polyester or polyester textile in an aqueous treating solution which comprises a heterocyclic N-halamine, a wetting agent and a catalyst; (b) removing the excess treating solution from the cellulosic, cellulosic/polyester or polyester textile; (c) drying the cellulosic, cellulosic/polyester or

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polyester textile; (d) curing the dried cellulosic, cellulosic/polyester or polyester textile; (e) washing the cured cellulosic, cellulosic/polyester or polyester textile to remove excess reagents; and (f) drying the treated cellulosic, cellulosic/polyester or polyester textile to remove water. In another embodiment, the present invention provides a process for rendering a cellulosic, cellulosic/polyester or polyester textile microbiocidal, the process comprising: (a) washing a microbiocidal cellulosic, cellulosic/polyester or polyester textile precursor with a halogenated solution, the microbiocidal textile precursor being prepared in accordance with the above method; and (b) drying the treated microbiocidal cellulosic, cellulosic/polyester or polyester textile to remove water. In the process, the halogenated solution can be a chlorine solution or, alternatively, a bromine solution. In a presently preferred embodiment, the halogenated solution is a chlorine solution (e.g., a chlorine bleach solution such as Clorox). The washing of the microbiocidal cellulosic, cellulosic/polyester or polyester textile precursor with a halogenated solution renders the textile biocidal and, in addition, it sterilizes the textile. In yet another embodiment, the present invention provides a composition for finishing fabrics, i.e., an aqueous treating solution, the composition comprising a wetting agent; and a heterocyclic N-halamine. In a preferred embodiment, the composition further includes a catalysts. In an even more preferred embodiment, the composition further includes additives (e.g., softeners and waterproofing agents) to impart favorable characteristics.

There are a myriad of applications areas for the microbiocidal textiles of the present invention. For instance, the microbiocidal textile materials can provide biocidal protective clothing to personnel in the medical area as well as in the related healthcare and hygiene area. In contrast to previously used textiles, the textiles of the present invention are not a barrier to microorganisms, but rather a disinfectant to them. As such, the regenerable and

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reusable biocidal materials can replace currently used disposable, nonwoven fabrics as medical textiles, thereby significantly reducing hospital maintenance costs and disposal fees. The microbiocidal properties of the textiles of the present invention can be advantageously used for women's wear, underwear, socks, and other hygienic purposes. In addition, the microbiocidal properties can be imparted to carpeting materials to create odor-free and germ-free carpets. Moreover, all germ-free environments, such as required in biotechnology and pharmaceutical industry, would benefit from the use of the microbiocidal textiles of the present invention to prevent any contamination from air, liquid, and solid media.

Sun et al. teach what is set forth, but does not explicitly set forth the use in the chassis of swimwear. A person having ordinary skill in the art at the time the invention was made would have found it obvious to have employed the microbiocidal textile as the fabric in the structure of well known swimwear. One would have been motivated to do this by the reasoned expectation of providing swimwear with built in disinfectants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti Singh whose telephone number is 703-305-0291. The examiner can normally be reached on M-F 8:00am to 6:00 pm.

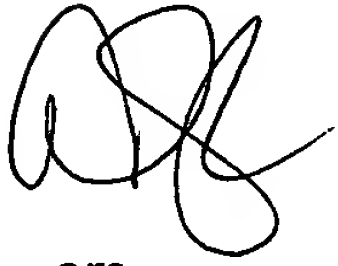
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-873-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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A handwritten signature in black ink, appearing to be 'AS' with a stylized flourish.

ars

July 28, 2003

Ms. Arti Singh
Patent Examiner
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